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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

09/980,105

02/22/2002

Hiroyuki Adachi

111232

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7590

10/06/2006

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EXAMINER

RUHL, DENNIS WILLIAM.

ART UNIT

PAPER NUMBER

3629

DATE MAILED: 10/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |  |                     |  |
|------------------------------|------------------------|--|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> |  | <b>Applicant(s)</b> |  |
|                              | 09/980,105             |  | ADACHI ET AL.       |  |
|                              | <b>Examiner</b>        |  | <b>Art Unit</b>     |  |
|                              | Dennis Ruhl            |  | 3629                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

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1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1,4-6,15, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

For claims 1,6, it is not clear as to what the claim is directed to. The preamble states that the claim is directed to a construction machine refueling system "for receiving information transmitted from a construction machine at a receiver in a base station", but then the rest of the claim is reciting specifics to the construction machine. The preamble indicates that the claim is directed to the system that receives the information from the construction machine, which implies that the construction machine is not part of the invention being claimed, but the body of the claim is directed to only the construction machine. The examiner is not clear as to what is being claimed. Is the claim directed to a construction machine only or the system that receives information from the machine (has a scope excludes the construction machine)? This is not clear and one wishing to avoid infringement would not know what the scope of the claim is. The examiner has examined the body of the claim with respect to prior art.

For claims 4,5, the scope of the claim is not clear. One wishing to avoid infringement would know if they are infringing the claim by having the system as claimed, or if they would be infringing the claim by having the claimed system and by using it in the claimed manner (i.e. "transmits a request of refueling"). Is this a method claim or an apparatus claim? Applicant has claimed various structure in a system claim

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and is now reciting a method step of positively using that structure, in an apparatus type claim. This is improper because method steps directed to using the recited structure in an apparatus claim is a mixing of two distinct statutory classes of invention, and renders the claim indefinite. It is not known whether or not these claims are method or apparatus claims and it is not known under what conditions infringement would occur.

For claim 15, what transmitter is being referred to here? There are two transmitters recited in claim 14 and it is not clear which one is being referred to in claim 15. This renders the claim indefinite.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 8-15, are rejected under 35 U.S.C. 102(e) as being anticipated by Kane et al. (6078850).

For claims 8-15, Kane discloses a construction machine refueling system. Kane discloses trains and the examiner considers that trains satisfy the claimed "construction machine" because trains are machines and trains transport construction supplies and equipment across the country. Trains are considered to fall in the scope of the term

“construction machine”. The fuel sensor of the train is 21 and transmits fuel level data to base station 3. The base station has a receiver that receives the fuel data.

Kane discloses that the base station 3 that has a processor that receives the fuel data from the trains. The processor also has software (a selector) that polls various refueling locations (fixed and mobile) for pricing information for fuel, and based on the received fuel pricing information, the train location, and the train fuel level, determines the best location for refueling. See column 4, lines 31-53 as well as the entire patent to Kane. The communication device is inherent to Kane because Kane polls refueling locations for pricing data. This requires a communication device. The communication device is capable of carrying out the step of sending a request as claimed.

5. Claims 14,15, are rejected under 35 U.S.C. 102(e) as being anticipated by Bunn (6240365).

Bunn discloses a method and system to track vehicles. The vehicles are considered to satisfy the claimed “construction machine”. The vehicles use GPS to determine location and a controller 32 in the vehicle transmits fuel level data and location data to a central headquarters computer 6. The transmitter is 34, the receiver is the part of the computer 6 that allows for receipt of data (modem and drivers, etc.). The invoice creating unit is disclosed in column 10, lines 3-15, where it is disclosed that a receipt is generated for the customer and is printed in the vehicle by a printer. The computer 6 is what calculates the final bill and receipt for the customer. This is then transmitted to the vehicle as claimed.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-7, are rejected under 35 U.S.C. 103(a) as being unpatentable over Apsell et al. (6292724).

For claims 1,2,7, Apsell discloses a method and system where construction equipment (construction vehicles) are monitored and tracked via GPS and vehicle sensors. The construction equipment (vehicles E) have a GPS unit that determines vehicle location and there is a transmitter (the transponders T) that sends the location information to a central base station (ground station GS). The vehicles also have various sensors that relay information concerning the vehicle to the transponder for transmission to the base station. One of the sensors is disclosed as being a fuel level

sensor. See figure 4. Also see column 4, line 50 to column 5, line 39 where the fuel sensor is disclosed along with the reasoning as to why this variable is important to the equipment operator. In column 5, lines 40-49 it is disclosed that the sensors may also be provided with the ability to activate the transponder in the event that an alarm condition is detected. The alarm condition can be operational parameters being out of range or safe values, or out of ranges for equipment location or out of ranges for allowed times of operation, etc.. Not disclosed is that if the fuel level drops below a certain level, information indicating such is transmitted to the base station. In addressing this issue the examiner takes "official notice" that it is old and well known in the art of vehicles to have a low fuel indicator (usually a light and a noise) to indicate to the driver that the vehicle is low on fuel. This indication is done when the fuel level drops below a certain value. This is done to alert the operator that the fuel level is low and allows one to refuel in a timely manner so that you do not run out of fuel. This feature is old and well known in the art. Taking this fact into account, and in view of the disclosure in column 5, lines 40-49 concerning the sensors and alarm conditions pertaining to operational parameters being out of range or safe values, one of ordinary skill in the art at the time the invention was made would have found it obvious to modify Apsell to detect when the fuel level (an operational parameter) of a vehicle drops below a certain value, and to transmit that fact to the base station, so that it can be determined whether or not a fuel truck needs to be sent out, and if so, how much fuel is needed (from column 4, lines 50-56). An alert of low fuel level is already known in the art. Based on this fact and the teaching of Apsell that operational parameter alarm

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conditions for the sensors are transmitted to the base station, one of ordinary skill in the art would have been motivated to modify Apsell as set forth by the examiner.

For claim 3, see column 3, line 64 to column 4, line 2.

For claims 4,5, the base station is also provided with a transmitter (communication relay S, see figure 1). See column 5, lines 45-49 where it is disclosed that special requests can be made to the transponder to transmit data to the base station. This request is sent through the base station side transmitter. With respect to the recitation that the base station transmits a request to a tie-up station, because the claims are apparatus claims and not method claims, this limitation has been considered only to the extent that the prior art must be capable of doing what is claimed. In this case, Apsell is fully capable of doing what is claimed because of the existence of the transmitter S. The examiner notes that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

For claim 6, Apsell discloses a method and system where construction equipment (construction vehicles) are monitored and tracked via GPS and vehicle sensors. The construction equipment (vehicles E) have a GPS unit that determines vehicle location and there is a transmitter (the transponders T) that sends the location information to a central base station (ground station GS). The vehicles also have various sensors that relay information concerning the vehicle to the transponder for transmission to the base station. One of the sensors is disclosed as being a fuel level



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sensor. See figure 4. Also see column 4, line 50 to column 5, line 39 where the fuel sensor is disclosed along with the reasoning as to why this variable is important to the equipment operator. The operation wants to know how much fuel is left in the vehicles so that it can be determined whether or not a truck needs to be sent out to refuel the vehicle and if so, how much fuel is needed. Not disclosed is that the base station has a determination unit that determines whether or not the received fuel level is below a specified value. In addressing this issue the examiner takes "official notice" that it is old and well known in the art of vehicles to have a low fuel indicator (usually a light and a noise) to indicate to the driver that the vehicle is low on fuel. This indication is done when the fuel level drops below a certain value. This is done to alert the operator that the fuel level is low and allows one to refuel in a timely manner so that you do not run out of fuel. This feature is old and well known in the art. Taking into account that the reason the fuel level is being transmitted to the base station is so that it can be determined when certain vehicles need refueling, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the base station with a determination unit (software program) that determines whether or not the received fuel level is below a specified value, so that the operator can be alerted to vehicles that have low fuel levels and that will need refueling in the near future. This is the reason the fuel level is being tracked, so that you can ensure the vehicles do not run out of fuel.

9. Claims 8-13, are rejected under 35 U.S.C. 103(a) as being unpatentable over Apsell et al. (6292724) in view of Kane et al. (6078850).

Apsell discloses the invention substantially as claimed. Apsell discloses a method and system where construction equipment (construction vehicles) are monitored and tracked via GPS and vehicle sensors. The construction equipment (vehicles E) have a GPS unit that determines vehicle location and there is a transmitter (the transponders T) that sends the location information to a communication device/receiver S of a central base station (ground station GS). The vehicles also have various sensors that relay information concerning the vehicle to the transponder for transmission to the base station. One of the sensors is disclosed as being a fuel level sensor. See figure 4. Also see column 4, line 50 to column 5, line 39 where the fuel sensor is disclosed along with the reasoning as to why this variable is important to the equipment operator. The operation wants to know how much fuel is left in the vehicles so that it can be determined whether or not a truck needs to be sent out to refuel the vehicle and if so, how much fuel is needed. Not disclosed is that there is a selector that selects an optimum refueling location based on the information received. Kane discloses a system and method for fuel management of trains. Kane discloses that there is a central station 3 that has a processor that receives fuel data from the trains. The processor also has software (a selector) that polls various refueling locations (fixed and mobile) for pricing information for fuel, and based on the received fuel pricing information, the train location, and the train fuel level, determines the best location for refueling. See column 4, lines 31-53 as well as the entire patent to Kane. It would have

been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Apsell with a selector software program that can poll various refueling locations for pricing information and can determine where the best location is to refuel, as taught by Kane. This would allow the cost savings discussed by Kane to be obtained by the system of Apsell. With respect to the recitation that the selector carries out communication with the refueling location selected by the selector to send a refueling request, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have the selector that selects the best refueling location, also send a request to that station for refueling of the vehicle so that the vehicle can be refueled.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Ruhl whose telephone number is 571-272-6808. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



**DENNIS RUHL**  
**PRIMARY EXAMINER**